IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A fine channel device comprising:

a fine channel provided with first and second inlet ports configured to feed fluid;

a fluid containing a catalyst disposed in the fine channel device;

first and second inlet channels communicated with the first and second inlet ports, respectively, wherein [[a]] the fluid containing a catalyst flows from the first inlet port to the first inlet channel;

a confluent portion communicated with the first and second inlet channels;

a branch portion communicated with the fine channel, from which first and second outlet channels are branched and configured to feed predetermined amounts of fluid;

first and second outlet ports communicated with the first and second outlet channels, respectively; and

a circulating channel configured to feed the fluid containing a catalyst discharged from the first outlet port to the first inlet port,

wherein the fine channel includes a plurality of partition walls disposed along a boundary formed by at least two kinds of fluid fed from the inlet ports configured to not cause mutual contamination of fluid,

wherein each partition wall of the plurality of partition walls includes an elongated upper edge that extends along a line parallel to a fluid flow path within the fine channel,

wherein the plurality of partition walls are disposed at intervals in a flowing direction of fluid, said intervals are longer than an elongated length of each partition wall, [[and]]

wherein intervals between the partition walls are present along the entire length of the fine channel except in the vicinity of the confluent portion and the vicinity of the branch portion of the fine channel, and wherein the partition walls include continuous partition walls

disposed in the vicinity of the confluent portion and in the vicinity of the branch portion of the fine channel, and

wherein a thermal barrier is disposed between the confluent portion and the branch portion.

Claim 2 (Previously Presented): The fine channel device according to claim 1, wherein in the plurality of partition walls, the partition wall located closest to the confluent portion of the fine channel is connected to the confluent portion, and wherein intervals between adjacent partition walls in the vicinity of the inlet channels are smaller than intervals between adjacent partition walls in a central portion of the fine channel.

Claim 3 (Previously Presented): The fine channel device according to claim 1, wherein the height of partition walls is substantially the same as the depth of the fine channel.

Claim 4 (Previously Presented): The fine channel device according to claim 1, wherein partition walls are disposed at positions apart from the confluent portion and the branch portion.

Claim 5 (Previously Presented): The fine channel device according to claim 1, wherein in the plurality of partition walls, the partition wall disposed closest to the branch portion of the fine channel is connected to the branch portion, and wherein intervals between adjacent partition walls in the vicinity of the outlet channels are smaller than intervals between adjacent partition walls in a central portion of the fine channel.

Claims 6-7 (Canceled).

Claim 8 (Previously Presented): The fine channel device according to claim 1, wherein a portion of the fine channel has a shape other than a straight shape, and said portion includes a wall disposed along the boundary that extends from the vicinity of a portion originating a non-straight portion of fine channel to the vicinity of a portion ending the non-straight portion of fine channel.

Claim 9 (Canceled).

Claim 10 (Previously Presented): The fine channel device according to claim 1, wherein in the vicinity of at least one of the inlet channels or the outlet channels of the fine channel, at least two partition walls are connected continuously in a flowing direction of fluid.

Claim 11 (Previously Presented): The fine channel device according to claim 1, wherein a plurality of projections are disposed at the inner wall of the fine channel partitioned by partition walls to such an extent capable of maintaining a flow of fluid.

Claim 12 (Previously Presented): The fine channel device according to claim 1, wherein said first and second inlet ports for feeding fluid, said first and second inlet channels communicated with said first and second inlet ports, said first and second outlet channels and said first and second outlet ports communicated with said first and second outlet channels are configured so that the flowing direction of either one of at least two kinds of fluid fed in the fine channel is opposite to the flowing direction of the other of said at least two kinds of fluid fed adjacently in the fine channel.

Claim 13 (Previously Presented): The fine channel device according to claim 1, wherein the inner wall at one side of the fine channel partitioned by partition walls has at least one of hydrophilic or hydrophobic properties.

Claim 14 (Previously Presented): The fine channel device according to claim 13, wherein the inner wall includes a material that is configured to have hydrophilic properties that are different from hydrophilic properties of a fluid to be fed into the fine channel.

Claim 15 (Previously Presented): The fine channel device according to claim 1, wherein a film is disposed between adjacent partition walls in a flowing direction of fluid, said film including pores with a diameter that is smaller than any distance between adjacent partition walls.

Claim 16 (Previously Presented): The fine channel device according to claim 15, wherein the film includes at least one of a polymeric material or an inorganic material.

Claim 17 (Previously Presented): The fine channel device according to claim 1, wherein a metallic film is disposed in the entire or a part of the inner surface of at least one of the fine channel or the wall surface of the partition walls.

Claim 18 (Previously Presented): The fine channel device according to claim 17, which further comprises at least one of a current supply means or a voltage supply means for the metallic film.

Claim 19 (Canceled).

Claim 20 (Previously Presented): The fine channel device according to claim 1, which further comprises a reservoir tank communicated with the circulating channel and a pump configured to store the supplied fluid temporally.

Claim 21 (Previously Presented): The fine channel device according to claim 1, which further comprises means for supplying energy to fluid flowing the fine channel.

Claim 22 (Previously Presented): The fine channel device according to claim 21, wherein said means for supplying energy to fluid is a heating device.

Claim 23 (Previously Presented): A fine channel device comprising a plurality of fine channels each as described in any one of claims 1 to 5, 8, and 10 to 17 formed two-dimensionally or three dimensionally.

Claim 24 (Currently Amended): A fine channel device comprising;

a fine channel provided with first and second inlet ports configured to feed fluid;

a fluid containing a catalyst disposed in the fine channel device;

first and second inlet channels communicated with the first and second inlet ports, respectively, wherein [[a]] the fluid containing a catalyst flows from the first inlet port to the first inlet channel;

a confluent portion communicated with the first and second inlet channels;

a branch portion communicated with the fine channel, from which first and second outlet channels are branched and configured to feed predetermined amounts of fluid;

first and second outlet ports communicated with the first and second outlet channels, respectively; and

a circulating channel configured to feed a fluid containing a catalyst discharged from the first outlet port to the first inlet port,

wherein the fine channel includes a plurality of partition walls, each partition wall with a height substantially the same as the depth of the fine channel, disposed along a boundary formed by at least two kinds of fluid fed from the inlet ports configured to not cause mutual contamination of fluid,

wherein each partition wall of the plurality of partition walls includes an elongated upper edge that extends along a line parallel to a fluid flow path within the fine channel,

wherein the plurality of partition walls are disposed at a distance that is greater than an elongated length of each partition wall, [[and]]

wherein intervals between the partition walls are present along the entire length of the fine channel except in the vicinity of the confluent portion and the vicinity of the branch portion of the fine channel, and wherein the partition walls include continuous partition walls disposed in the vicinity of the confluent portion and in the vicinity of the branch portion of the fine channel, and

wherein a thermal barrier is disposed between the confluent portion and the branch portion.

Claims 25-34 (Canceled).

Claim 35 (Currently Amended): ~~The fine channel device according to claim 21~~ A fine channel device comprising:

a fine channel provided with first and second inlet ports configured to feed fluid;

a fluid containing a catalyst disposed in the fine channel device;

first and second inlet channels communicated with the first and second inlet ports, respectively, wherein the fluid containing a catalyst flows from the first inlet port to the first inlet channel;

a confluent portion communicated with the first and second inlet channels;

a branch portion communicated with the fine channel, from which first and second outlet channels are branched and configured to feed predetermined amounts of fluid;

first and second outlet ports communicated with the first and second outlet channels, respectively;

a circulating channel configured to feed the fluid containing a catalyst discharged from the first outlet port to the first inlet port; and

means for supplying energy to fluid flowing the fine channel,

wherein the fine channel includes a plurality of partition walls disposed along a boundary formed by at least two kinds of fluid fed from the inlet ports configured to not cause mutual contamination of fluid,

wherein each partition wall of the plurality of partition walls includes an elongated upper edge that extends along a line parallel to a fluid flow path within the fine channel,

wherein the plurality of partition walls are disposed at intervals in a flowing direction of fluid, said intervals are longer than an elongated length of each partition wall,

wherein intervals between the partition walls are present along the entire length of the fine channel except in the vicinity of the confluent portion and the vicinity of the branch portion of the fine channel, and wherein the partition walls include continuous partition walls disposed in the vicinity of the confluent portion and in the vicinity of the branch portion of the fine channel,

wherein said means for supplying energy is a light irradiation device.

Claim 36 (Previously Presented): The fine channel device according to claim 35, wherein the light irradiation device is configured to irradiate light on a portion of the fine channel through a mask.

Claim 37 (Previously Presented): The fine device according to claim 22, wherein the heating device is disposed at an upstream side of the fine channel.

Claim 38 (Currently Amended): ~~The fine channel device according to claim 37,~~ A fine channel device comprising:

a fine channel provided with first and second inlet ports configured to feed fluid;

a fluid containing a catalyst disposed in the fine channel device;

first and second inlet channels communicated with the first and second inlet ports, respectively, wherein the fluid containing a catalyst flows from the first inlet port to the first inlet channel;

a confluent portion communicated with the first and second inlet channels;

a branch portion communicated with the fine channel, from which first and second outlet channels are branched and configured to feed predetermined amounts of fluid;

first and second outlet ports communicated with the first and second outlet channels, respectively;

a circulating channel configured to feed the fluid containing a catalyst discharged from the first outlet port to the first inlet port; and

means for supplying energy to fluid flowing the fine channel,

wherein the fine channel includes a plurality of partition walls disposed along a boundary formed by at least two kinds of fluid fed from the inlet ports configured to not cause mutual contamination of fluid,

wherein each partition wall of the plurality of partition walls includes an elongated upper edge that extends along a line parallel to a fluid flow path within the fine channel,

wherein the plurality of partition walls are disposed at intervals in a flowing direction of fluid, said intervals are longer than an elongated length of each partition wall,

wherein intervals between the partition walls are present along the entire length of the fine channel except in the vicinity of the confluent portion and the vicinity of the branch portion of the fine channel, and wherein the partition walls include continuous partition walls disposed in the vicinity of the confluent portion and in the vicinity of the branch portion of the fine channel,

wherein said means for supplying energy to fluid is a heating device,

wherein the heating device is disposed at an upstream side of the fine channel, and

wherein a heat insulation material is embedded in the fine channel device at a downstream side of the fine channel.

Claim 39 (Previously Presented): The fine channel device according to claim 1, wherein the catalyst is a phase transfer catalyst.

Claim 40 (Previously Presented): The fine channel device according to claim 39, wherein the catalyst is an energy dependence phase transfer catalyst.

Claim 41 (Previously Presented): The fine channel device according to claim 40, wherein the catalyst is a temperature dependence phase transfer catalyst.